

CHANGES TO THE SPECIFICATION

1. Amended paragraph at page 9, lines 15 through 20

The method of the invention will now be explained with reference to the a schematic diagram of a resetting Coriolis gyro 1' of Figure 1. The resetting Coriolis gyro 1' additionally includes a disturbance unit 26, a demodulation unit 27, a regulator control unit 28, a fifth low-pass filter 29 and a multiplier 30.

2. Amended paragraph at page 9, line 21 through page 10, line 6

The disturbance unit 26 generates an alternating signal of frequency ω_{mod} that is added to the output of the amplitude regulator. As an alternative, band-limited noise can also be used as a disturbance signal. Furthermore, this alternating signal is supplied to the demodulation unit 27. The collated signal obtained in this way (output from the amplitude regulator and alternating signal) is supplied to a (first) modulator 11 whose output signal is applied to a force transmitter (not shown), and, thus to the resonator 2. As a result, an alternating force that ~~that~~ corresponds to the alternating signal is also applied to the resonator 2. Such alternating force can be observed, after "passing through" the resonator 2, in the form of a disturbance component in the tapped-off read oscillation signal.

3. Amended paragraph at page 10, line 7 through page 11, line 1

In this example, the signal emitted from the rotation rate regulator is subjected to a demodulation process carried out by the demodulation unit 27 at the frequency ω_{mod} (disturbance frequency). The signal (disturbance component) obtained is filtered by the fifth low-pass filter 29 and supplied to the control unit 28. The signal supplied to the control unit 28 represents a measure of the zero-point error. The control unit 28 produces an output signal as a function of the signal supplied to it. Such output signal is supplied to the multiplier 30 and is in such a form that the disturbance component of the tapped-off read oscillation signal is controlled to be as small as possible. The multiplier 30 multiplies the collated signal (output signal from the amplitude regulator and alternating signal) supplied to it by the output from the control unit 28, and, thus, produces an output signal that is added to the total signal emitted from the rotation rate regulator. The bias of the Coriolis gyro is thus reset. The signal supplied to the demodulation unit 27, which may also be the signal which is supplied to the rotation rate regulator 21, or supplied to/emitted from the quadrature regulator 17. The signal supplied to the demodulation unit 27 may also be the tapped-off read oscillation signal itself. In the latter case, the operating frequency ω must also be accounted for during the demodulation

4. Amended paragraph at page 12, line 14 through page 13, line 4

A major discovery on which the invention is based is that an artificial change to the stimulation oscillation resulting from the application of appropriate disturbance forces to the resonator can be observed in the tapped-off read oscillation signal: the change (modulation) of the stimulation oscillation also results in a change in the read oscillation due to the manufacturing tolerances of the Coriolis gyro. That is, the disturbance force is applied essentially to the first resonator, but a partial component of this disturbance force is also applied to the second resonator. The "penetration strength" of a disturbance such as this to the tapped-off read oscillation signal is thus a measure of the zero-point error ("bias") of the Coriolis gyro. If, therefore, the strength of the disturbance component contained in the read signal is determined and compared with the strength of the disturbance force (change in the stimulation oscillation), the zero-point error can be derived. A disturbance component signal which is proportional to the disturbance component can then be used to compensate directly for the zero-point error.

5. Amended paragraph at page 13, lines 5 through 11

The disturbance forces are preferably produced by a disturbance signals that are supplied to appropriate force transmitters, or are added to signals which are supplied to the force transmitters. For example, a disturbance signal can be added to the respective control signals for control of the stimulation oscillation, to produce the disturbance force.

6. Amended paragraph at page 13 line 23 through page 14, line 5

The disturbance frequency of the disturbance signal/the disturbance force preferably has a period which is substantially shorter than the time constant of the stimulation oscillation and of the same order of magnitude (or greater than) the time constant of the Coriolis gyro. One alternative is to employ band-limited noise as a disturbance in the place of an alternating signal. In such case, the disturbance component is demodulated from form the read signal by correlation of the noise signal with the signal that contains the disturbance component, (e.g. the tapped-off read oscillation signal.)